

c) a plurality of temperature sensors on an exterior portion of the distal shaft section, being positioned so that at least one temperature sensor is disposed between two adjacent electrodes.

2. (Amended) The device of claim 1 [further including] wherein the electrical conductors comprise a plurality of electrode electrical conductors which are each electrically connected to an individual electrode at a distal end of the electrode electrical conductor and having a proximal end configured to connect to an electrical source, and a plurality of temperature sensor electrical conductors which are each electrically connected to an individual temperature sensor at a distal end of the temperature sensor electrical conductor.

18. (Amended) An electrophysiology device assembly, comprising:

a) a guiding member having an elongated shaft having a proximal end, a distal end, a port in the proximal end, a port in a distal shaft section, and a lumen extending therein; and

b) an electrophysiology device slidably disposed in the lumen of the guiding member, comprising:

an elongated shaft having a proximal end, a distal end, and a distal shaft section, and a plurality of electrical conductors helically braided into the shaft;

A²
a plurality of electrodes on an exterior portion of the distal shaft section; and

a plurality of temperature sensors on an exterior portion of the distal shaft section, being positioned so that at least one temperature sensor is disposed between two adjacent electrodes.

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A³
20. (Amended) A method for treating a patient, comprising:

a) providing an electrophysiology device, comprising:

an elongated shaft having a proximal end, a distal end, and a distal shaft section, and a plurality of electrical conductors helically braided into the shaft;

a plurality of electrodes on an exterior portion of the distal shaft section; and

a plurality of temperature sensors on an exterior portion of the distal shaft section, being positioned so that at least one temperature sensor is disposed between two adjacent electrodes;

b) introducing the device into the patient's vasculature and advancing the device until the distal section of the device is disposed within a chamber of the patient's heart;

a³

c) placing at least one electrode on the device distal shaft section in contact with a desired surface of the heart chamber; and

d) delivering high frequency electrical energy to two adjacent electrodes on the device and measuring the temperature at a temperature sensor between the two electrodes, to form a first lesion and a second lesion continuous with the first lesion on the surface of the heart chamber.

Please add new claims 29 and 30.

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29. An electrophysiology device, comprising:

a) an elongated shaft having a proximal end, a distal end, and a distal shaft section;

b) a plurality of electrodes on an exterior portion of the distal shaft section; and

c) a plurality of temperature sensors on an exterior portion of the distal shaft section, being positioned so that at least one temperature sensor is disposed between two adjacent electrodes, and each temperature sensor having a conducting member comprising an annular band disposed about the shaft and the temperature sensor thereon, which transmits heat to the temperature sensor.

30. The device of claim 29 wherein the annular band is formed of metal.